REMARKS/ARGUMENTS

The Office Action mailed February 21, 2006, has been received and reviewed. Claims 1 through 20 are currently pending in the application. Claims 1 through 20 stands rejected. Applicants have amended claims 2 and 3, have canceled claim 1, and respectfully request reconsideration of the application as amended herein.

35 U.S.C. § 102(b) Anticipation Rejections

Anticipation Rejection Based on U.S. Patent No. 6,494,942 to Deardurff et al.

Claims 1 and 2 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Deardurff et al. (U.S. Patent No. 6,494,942). Applicants respectfully traverse this rejection, as hereinafter set forth.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Claim 1 has been cancelled and claim 2 has been amended to depend from claim 3. As acknowledged by the Examiner, Claim 3 is not anticipated by Deardurff et al. Therefore, the rejection to claim 1 is moot and the rejection to claim 2 has been overcome.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on U.S. Patent No. 6,494,942 to Deardurff et al. in view of U.S. Patent No. 4,877,686 to Riou et al.

Claims 3 through 5, 8, and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Deardurff et al. (U.S. Patent No. 6,494,942) in view of Riou et al. (U.S. Patent No. 4,877,686). Applicants respectfully traverse this rejection, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis added).

The 35 U.S.C. § 103(a) obviousness rejections of claims 3-5, 8 and 9 are improper because the combined references do not teach all of the claim limitations, there is not motivation to combine the references, and the teach away from the claimed combination of elements.

Deardurff is drawn to an aqueous ink jet ink that includes an azomethine dye having a water solubilizing functional group attached thereto. The water solubilizing group includes use of boronic acids. However, as acknowledged by the Examiner, Deardurff does not teach or suggest a coating layer on a coated print medium that comprises a polyhydroxylated material.

Riou is drawn to a treated base material for recording sheets for ink jet printing. The coating includes a polyhydroxylic polymeric binder with hydroxyl groups. The coating is gelled or coagulated with boric acid or derivatives thereof during coating and with a filler having high absorption capacity. (See Abstract and Summary sections of Riou). As discussed in the Background of Riou, when printing on the layer of the recording sheets, defects are observed in the shape and uniformity of printing dots, which include migration of ink along fissures or hair cracks in the layer of the printing sheet, causing irregular shapes of dots. (See Riou, Col. 1, line 65 to Col. 2, line 12). To eliminate these defects, Riou proposes producing a coated printing sheet for ink jet printing to reduce hair cracks and improve ink jet printing. (Id. at Col. 2, line 13 to Col. 3, line 36). Riou teaches a sheet that, in the sheet, the polyhydroxylic polymeric binder has been gelled (or coagulated) by reaction with boric acid and/or its derivatives, which "has to take place during the coating operation" to form a "finished product (sheet)." (Id. at Col. 3, line 45 to col. 4, line 12). The two main constituents of the coating layer are the binder and the filler. (Id. at Col. 4, lines 20-24).

Amended, independent claim 3 is drawn to a printing system comprising an inkjet ink

having a boronic acid dye and a coated print medium, wherein a coating layer on the coated print medium comprises a polyhydroxylated material. However, Deardurff and Riou do not teach each and every element of the pending claims. As discussed above, Deardurff does not teach or suggest a coating layer on a coated print medium that comprises a polyhydroxylated material. In contrast, Riou teaches use of a polyhydroxylated material for use as a layer in a printing sheet, but does not teach or suggest an inkjet ink having a boronic acid dye. Instead, Riou teaches away from such a concept by teaching formation of a printing sheet that is coated with a layer formed from a polyhydroxylic polymeric binder that has been gelled (or coagulated) by reaction with boric acid and/or its derivatives, which gelling occurs during the coating operation, with addition of fillers, to form a finished product (sheet). Thus, Riou teaches formation of a finished, coated printing sheet containing a coagulated layer formed from polymeric binders, fillers, and boric acid. As acknowledged in the Examples of Riou, once this finished printing sheet is formed, any type of ink can be used, since there is no subsequent reaction expected between the coated layer and the ink. Therefore, Riou teaches away from combining a boronic acid dye with a polyhydroxylated coating layer.

The cited references also do not provide a motivation to combine because the combination of Riou and Deardurff would render the solubized ink of Deardurff inoperable for its intended purpose. If a proposed modification would render the prior art invention being modified inoperable for its intended purpose, then there is no suggestion or motivation to make the proposed modification. M.P.E.P. § 2143.01.

The nonobviousness of independent claim 3 precludes a rejection of claims 4, 5, 8 and 9, which depend therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. *See* In re Fine, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, the Applicant requests that the Examiner withdraw the 35 U.S.C. § 103(a) obviousness rejection to independent claim 3 and claims 4, 5, 8 and 9 which depend therefrom.

Obviousness Rejection Based on U.S. Patent No. 6,494,942 to Deardurff et al. and U.S. Patent No. 4,877,686 to Riou et al., and further in view of U.S. Patent Application No. 2004/0125169 to Nakagawa et al.

Claims 6, 7, 10, and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Deardurff et al. (U.S. Patent No. 6,494,942) and Riou et al. (U.S. Patent No. 4,877,686) and further in view of Nakagawa et al. (U.S. Patent Application No. 2004/0125169). Applicants respectfully traverse this rejection, as hereinafter set forth.

Claims 6, 7, 10 and 11 are not obvious in view of Deardurff and Riou for the same reasons set forth above.

Nakagawa is relied upon as teaching use of hydroxyl groups in polyhydroxylated compounds. However, Nakagawa does not teach or suggest use of these hydroxyl groups in coating layers on a printing medium. Instead, the polyhydroxylated compounds of Nakagawa are used in water-repellent films that are formed on ink jet heads and ink jet type apparatus to prevent intrusion of alkali ions found in alkaline ink. As such, there is no suggestion or motivation to combine Nakagawa with Deardurff and Riou, as it is drawn to a completely different use of polyhydroxylated compounds for a completely unrelated function. Furthermore, Nakagawa does not overcome the shortcomings of Deardurff and Riou.

In view of the foregoing, Applicants respectfully request withdrawal of the rejections to claims 6, 7, 10 and 11.

Obviousness Rejection Based on U.S. Patent No. 6,494,942 to Deardurff et al. and U.S. Patent No. 5,973,025 to Nigam et al.

Claims 12, 16, and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Deardurff et al. (U.S. Patent No. 6,494,942) and Nigam et al. (U.S. Patent No. 5,973,025). Applicants respectfully traverse this rejection, as hereinafter set forth.

Claims 12, 16 and 18 are not obvious in view of Deardurff for the same reasons set forth above. As acknowledged by the Examiner, Deardurff does not teach or suggest a coating layer on a coated print medium that comprises a polyhydroxylated material.

Nigam is relied upon as teaching "forming a covalent bond between the boric acid and the coating layer." (Office Action at page 5). However, Applicants disagree with the Examiner's

reading of Nigam. Nigam teaches aqueous ink composition that comprise an aqueous liquid vehicle, a colorant, and a binder material adapted to ionically or physically entrap the colorant. (See Nigam at Abstract and Col. 8, lines 51-58). As with Deardurff, Nigam does not teach or suggest a coating layer on a coated print medium that comprises a polyhydroxylated material. Nigam is limited to use of binders to form aqueous ink compositions. Additionally, Nigam does not describe, teach or suggest "forming a covalent bond between boric acid and a coating layer", since Nigam does not mention boric acid or coating layers at all. The only mention of covalent bonding relates to discussion of "colorants which tend to be immobilized on the selected resin, e.g., through covalent or ionic attachment." (Nigam at Col. 9, lines 47-49). This, again, is in reference to colorants and resins (binders) that are contained within the aqueous ink composition being formed.

In view of the foregoing, the combination of Deardurff and Nigam do not teach or suggest all of the claim limitations. As such, Applicants respectfully request withdrawal of the rejections to claims 12, 16, and 18.

Obviousness Rejection Based on U.S. Patent No. 6,494,942 to Deardurff et al. and U.S. Patent No. 5,973,025 to Nigam et al., in further view of U.S. Patent No. 4,877,686 to Riou et al.

Claims 13 through 15, 19, and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Deardurff et al. (U.S. Patent No. 6,494,942) and Nigam et al (U.S. Patent No. 5,973,025) in further view of Riou et al. (U.S. Patent No. 4,877,686). Applicants respectfully traverse this rejection, as hereinafter set forth.

Claims 13-15, 19, and 20 are not obvious in view of Deardurff, Nigam, and Riou for the same reasons set forth above.

The nonobviousness of independent claims 12 and 18 preclude a rejection of claims 13-15, 19, and 20, which depend therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. *See* In re Fine, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, the Applicant requests that the Examiner withdraw the 35 U.S.C. § 103(a) obviousness rejection to independent claims 12 and 18 and claims 13-15, 19, and 20 which depend therefrom.

Obviousness Rejection Based on U.S. Patent No. 6,494,942 to Deardurff et al. and U.S. Patent No. 5,973,025 to Nigam et al., in further view of U.S. Patent Application No. 2004/0125169 to Nakagawa et al.

Claim 17 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Deardurff et al. (U.S. Patent No. 6,494,942) and Nigam et al (U.S. Patent No. 5,973,025) in further view of Nakagawa et al. (U.S. Patent Application No. 2004/0125169). Applicants respectfully traverse this rejection, as hereinafter set forth.

Claim 17 is not obvious in view of Nigam and Nakagawa for the same reasons set forth above.

The nonobviousness of independent claim 12 precludes a rejection of claim 17, which depend therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. *See* In re Fine, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, the Applicant requests that the Examiner withdraw the 35 U.S.C. § 103(a) obviousness rejection to independent claim 12 and claim 17 which depend therefrom.

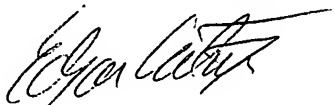
ENTRY OF AMENDMENTS

The amendments to claims 2 and 3 above should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add any new matter to the application.

CONCLUSION

Claims 2-20 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicants' undersigned attorney.

Respectfully submitted,



Edgar R. Cataxinos
Registration No. 39,931
Attorney for Applicants
TRASKBRITT
P.O. Box 2550
Salt Lake City, Utah 84110-2550
Telephone: 801-532-1922

Date: May 22, 2006
ERC/sfc:es
Document in ProLaw